### Message

From: Nguyen, Thuy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=FDF4C9A977D4493E948C607108A47C0E-THUY NGUYEN]

**Sent**: 7/21/2021 5:00:31 PM

To: Kalmykova, Yulia [YKalmykova@trccompanies.com]; Qian, Yaorong [qian.yaorong@epa.gov]

CC: Denly, Elizabeth [edenly@trccompanies.com]
Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

#### Yulia et al

We will provide the results of the leachates after the completion of the study and after review and approval of our upper management, probably late  $1^{st}$  Q of FY'22

Thanks Thuy

### \*\*\*\*\*\*\*

Thuy L. Nguyen, Branch Chief Analytical Chemistry Branch USEPA/OPP/Biological and Economic Analysis Division (7503P) Environmental Science Center 701 Mapes Road Suite 5350 Ft Meade, Maryland 20755-5350

Phone: 410-305-2905 Fax: 410-305-3091

From: Kalmykova, Yulia < YKalmykova@trccompanies.com>

Sent: Wednesday, July 21, 2021 12:56 PM

To: Qian, Yaorong <qian.yaorong@epa.gov>; Nguyen, Thuy <Nguyen.Thuy@epa.gov>

Cc: Denly, Elizabeth <edenly@trccompanies.com>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

I wanted to ask if you could provide us with the results of leachates that you did on fluorinated containers. Mark Smith from MassDEP has mentioned that you reported detection of PFAS in these leachates.

Thank you,

Yulia Kalmykova, Ph.D., CFM Senior Project Manager



2 Liberty Square, Boston, MA 02109

Phone: 857.301.3932

From: Qian, Yaorong <qian.yaorong@epa.gov>

Sent: Thursday, July 8, 2021 11:56 AM

To: Kalmykova, Yulia < YKalmykova@trccompanies.com >; Nguyen, Thuy < Nguyen.Thuy@epa.gov >

Cc: Denly, Elizabeth <edenly@trccompanies.com>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hi Yulia,

I apologize for taking so long to get back to you. We still do not have a satisfactory method for the processing and analysis of the products containing high levels of surfactants. We tried the method you sent to us and the results were not satisfactory to us either.

For the different methods we have tried, the results of the five samples appear to be relatively consistent (see below). The hits and levels from different methods are similar. The recoveries from fortified samples (matrix spike sample and lab blank spike with 1% surfactant aqueous solution) are not acceptable to us so far. The recoveries ranged from 0% to 150%, depending on the analytes. Although the results of the samples are similar from different method trials, we do not have high confidence of the results because the poor performance of the methods. We are still exploring other ways to analyze the samples with high levels of surfactants. It may take some time for us to figure out a good way.

	Suspend PZ		Suspend SC		Agua Zenivex E20 Lot 1	Agua Zenivex E20 Lot 2	Vectobac 12AS	
PFPeA	<loq< td=""><td></td><td></td><td></td><td></td><td></td><td></td></loq<>							
PFPeS							<loq< td=""></loq<>	
PFBA	<loq< td=""><td></td><td><loq< td=""><td></td><td></td><td></td><td></td></loq<></td></loq<>		<loq< td=""><td></td><td></td><td></td><td></td></loq<>					
N-MeFOSAA								
N-EtFOSAA								
PFOS								
PFNA								
PFNS								
PFOA								
PFHpS								
PFHxS								
PFHpA								
PFHxA		0.167		0.167				
PFBS								
PFDoS								
PFHxDA								
PFODA								
FOSAA								
PFTeDA								
PFTrDA							0.260	
PFDoA								
PFUdA							0.520	
PFDA								
PFDS								
HFPO-DA								
NaDONA								
9CI-PF3ONS								

### 11CI-PF3OUdS

The values are in ppb (ng/g of sample) and our LOQ is 0.025 ppb for oily matrix. Because we do not have a working method yet for surfactant sample matrix, we used the LOQ from the oily matrix for these data.

I hope we will find a working method soon.

Thanks and best wishes,

Yaorong

From: Kalmykova, Yulia < YKalmykova@trccompanies.com>

Sent: Thursday, July 01, 2021 9:55 AM

To: Qian, Yaorong <qian.yaorong@epa.gov>; Nguyen, Thuy <Nguyen.Thuy@epa.gov>

Cc: Denly, Elizabeth <edenly@trccompanies.com>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

I was wondering when you think your new results will be available, especially for the Vectobac samples.

Please let me know.

Thank you,

Yulia Kalmykova, Ph.D., CFM Senior Project Manager



2 Liberty Square, Boston, MA 02109 **Phone:** 857.301.3932

From: Qian, Yaorong <a href="mailto:qian.yaorong@epa.gov">gian.yaorong@epa.gov</a>>
Sent: Wednesday, June 16, 2021 10:09 AM

To: Kalmykova, Yulia < YKalmykova@trccompanies.com>; Nguyen, Thuy < Nguyen.Thuy@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hi Yulia,

Yes, we analyzed the remaining samples twice and we did not find any PFAS in all the equipment and field blanks. We also did not find any PFAS in the remaining five samples (Aqua Zenivex E20 Lot 1 and Lot 2, Suspend SC and Suspend PZ, Vectobac 12AS).

However, we are not happy with the spike recovery from the spiked matrix sample for many compounds. The recovery for some compounds are high and for some are low. We are still exploring different ways to process the samples with high amount surfactants to achieve good recoveries.

I will let you know after we have a good method and the samples are re-analyzed.

Sorry about the slow progress.

Thanks,

Yaorong

From: Kalmykova, Yulia <YKalmykova@trccompanies.com>

Sent: Tuesday, June 15, 2021 5:32 PM

To: Qian, Yaorong <qian.yaorong@epa.gov>; Nguyen, Thuy <Nguyen.Thuy@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

Just checking if you have any updates on the analyses. Please let me know.

Thank you!

Yulia Kalmykova, Ph.D. Senior Project Manager



2 Liberty Square, Boston, MA 02109 **Phone:** 857.301.3932

From: Qian, Yaorong <a href="mailto:qian.yaorong@epa.gov">qian.yaorong@epa.gov</a>

Sent: Tuesday, May 25, 2021 11:22 AM

To: Kalmykova, Yulia < YKalmykova@trccompanies.com >; Nguyen, Thuy < Nguyen.Thuy@epa.gov >

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hi Yulia,

Thanks for checking. It is on my to do list this week. Sorry about the delay.

Yaorong

From: Kalmykova, Yulia < YKalmykova@trccompanies.com>

Sent: Tuesday, May 25, 2021 10:44 AM

To: Qian, Yaorong <qian.yaorong@epa.gov>; Nguyen, Thuy <Nguyen.Thuy@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

I was just wondering of you analyzed more samples since your e-mail below.

Please let me know.

Yulia Kalmykova, Ph.D. Senior Project Manager



2 Liberty Square, Boston, MA 02109 Phone: 857.301.3932

From: Qian, Yaorong <gian.yaorong@epa.gov>

Sent: Thursday, May 6, 2021 4:16 PM

To: Kalmykova, Yulia < YKalmykova@trccompanies.com>; Nguyen, Thuy < Nguyen. Thuy@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hi Yuliya,

Just want to drop you a note to tell you that we analyzed half of the Plymouth and Georgetown split samples you sent to us earlier. We will work on the remaining samples next week.

For the samples we analyzed, we only found low levels of some PFAS in some samples, mostly are near or below our limit of quantitation (LOQ). Our LOQ is 0.025 ppb for these oily samples.

	Plymouth Field dup 1	Plymouth Field dup 2	Georgetown field dup	Plymouth Anvil unopen lot 1	Plymouth Anvil unopen lot 2	Plymouth BVA 2 open	Plymouth BVA unopen	Georgetown Duet open	Georgetown Duet unopen
PFPeA	<b>20</b>	-	<loq< td=""><td>200</td><td>0.025</td><td>-</td><td></td><td>-</td><td>-</td></loq<>	200	0.025	-		-	-
PFPeS	-	-	-	-	-	-	-	-	-
PFBA	-	-	0.030	-	-	-	-	-	-
N-									
MeFOSAA	-	-	-	-	-	-	-	-	-
N-									
EtFOSAA	-	-	-	-	-	-	-	-	-
PFOS	-	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-	-
PFNS	-	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-	-
PFHpS	-	-	-	-	-	-	-	-	-
PFHxS	-	-	-	-	-	-	-	-	-
PFHpA	<loq< td=""><td>-</td><td><loq< td=""><td><loq< td=""><td><loq< td=""><td>-</td><td>-</td><td>-</td><td><loq< td=""></loq<></td></loq<></td></loq<></td></loq<></td></loq<>	-	<loq< td=""><td><loq< td=""><td><loq< td=""><td>-</td><td>-</td><td>-</td><td><loq< td=""></loq<></td></loq<></td></loq<></td></loq<>	<loq< td=""><td><loq< td=""><td>-</td><td>-</td><td>-</td><td><loq< td=""></loq<></td></loq<></td></loq<>	<loq< td=""><td>-</td><td>-</td><td>-</td><td><loq< td=""></loq<></td></loq<>	-	-	-	<loq< td=""></loq<>
PFHxA	0.058	_	0.069	0.068	0.070	-	-	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
PFBS	-	-	-	-	-	-	-	-	-
PFDoS	-	-	-	-	-	-	-	-	-
PFHxDA	-	-	-	-	-	-	-	-	_
PFODA	_	_	-	_	-	-	_	-	-

FOSAA	-	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-	-
PFUdA	-	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-	-
PFDS	-	-	-	-	-	-	-	-	-
HFPO-DA	-		-	-	-	-		-	-
NaDONA	-	-	-	-	_	_	-	-	_

This is preliminary and it may change when we go through our QA review. After we complete all the analysis, we will send you a final report.

Thanks,

# Yaorong

From: Kalmykova, Yuliya <YKalmykova@trccompanies.com>

Sent: Wednesday, April 28, 2021 2:54 PM

To: Qian, Yaorong <qian.yaorong@epa.gov>; Nguyen, Thuy <Nguyen.Thuy@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

That's right, Yaorong. You didn't receive Waltham samples because this was our first location and we were not yet notified to send you split samples.

Thank you,

Yuliya Kalmykova, Ph.D. Senior Project Manager



2 Liberty Square, Boston, MA 02109

**Phone:** 857.301.3932

LinkedIn | Twitter | Blog | TRCcompanies.com

From: Qian, Yaorong <a href="mailto:qian.yaorong@epa.gov">qian.yaorong@epa.gov</a>>
Sent: Wednesday, April 28, 2021 2:18 PM

To: Kalmykova, Yuliya < YKalmykova@trccompanies.com>; Nguyen, Thuy < Nguyen.Thuy@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Thanks Yuliya.

I checked the samples we received and found that the samples received include

Georgetown Vectobac 12AS
Plymouth Anvil 10+10 (Lot 1 and Lot 2)
Georgetown Suspend SC and Suspend PZ

Plymouth Agua Zenivex E20 (lot 1 and lot 2).

We do not have

Waltham vectobac 12AS Waltham Mavrik.

We will get these samples analyzed as soon as possible.

Thanks,

Yaorong

From: Kalmykova, Yuliya < YKalmykova@trccompanies.com>

Sent: Wednesday, April 28, 2021 1:49 PM To: Nguyen, Thuy < Nguyen. Thuy @epa.gov> Cc: Qian, Yaorong <qian.yaorong@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hello Thuy,

Following-up on our call about pesticide samples.

PFAS has been detected in several samples, including in the products from containers that were reportedly nonfluorinated.

Below is the priority list from MassDEP that you maybe can use as a guidance for selecting samples to analyze:

#1 = Georgetown: vectovbac (one) and waltham vectobac 12as (all 3);

#2 = Plymouth: Anvil 10+10 (lot 1 and lot 2);

#3 = Georgetown: Suspend (both) and Waltham Mavrik (both);

#4 =Plymouth: Aqua Zenivex

Thank you,

Yuliya Kalmykova, Ph.D. Senior Project Manager



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From: Kalmykova, Yuliya

Sent: Monday, April 26, 2021 12:03 PM To: Qian, Yaorong <qian.yaorong@epa.gov> Cc: Nguyen, Thuy < Nguyen. Thuy @epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

We have the results from Alpha. MassDEP requested that we summarize all the results from this sampling campaign in a technical memorandum.

Please let me know when you can share results from your lab.

Thank you,

Yuliya Kalmykova, Ph.D. Senior Project Manager



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From: Qian, Yaorong < gian.yaorong@epa.gov> Sent: Tuesday, March 16, 2021 12:13 PM

To: Kalmykova, Yuliya <YKalmykova@trccompanies.com>

Cc: Nguyen, Thuy < Nguyen. Thuy@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

This is an EXTERNAL email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hi Yuliya,

We received the samples you sent to us. The samples are received on ice and in good condition. Attached is the signed COC for these samples.

Thanks,

Yaorong Qian, Th.D

Senior Chemist Analytical Chemistry Branch BEAD, Office of Pesticide Programs U.S. EPA 701 Mapes Rd. Ft. Meade, MD 20755 410-305-2636

From: Kalmykova, Yuliya < YKalmykova@trccompanies.com>

Sent: Monday, March 15, 2021 7:42 AM To: Qian, Yaorong <qian.yaorong@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

Thank you for the prompt reply. We will collect 100ml for formulated products and 250ml for field and equipment blanks.

Samples are expected to be delivered to EPA by 10.30 AM on Tuesday (tomorrow).

Thank you,

Yuliya Kalmykova, Ph.D. Senior Project Manager



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From: Qian, Yaorong < gian.yaorong@epa.gov>

Sent: Friday, March 12, 2021 12:06 PM

To: Kalmykova, Yuliya < YKalmykova@trccompanies.com> Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

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Hi Yuliya,

What are the sample types? Formulated products or water samples? We do not need much for the formulated products. We can work with as little as 20 ml. If we can get 100 ml, it would be great.

For water samples, we can work with as little as 50 ml.

Thanks,

Yaorong

From: Kalmykova, Yuliya <YKalmykova@trccompanies.com>

**Sent:** Friday, March 12, 2021 11:18 AM To: Qian, Yaorong <qian.yaorong@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

I was wondering what minimum size of the aliquot is needed to run samples in your lab. For some products, the quantity isn't enough to fill 2\*250 ml containers.

Please let me know.

Thank you,

Yuliya Kalmykova, Ph.D. Senior Project Manager



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From: Qian, Yaorong <gian.yaorong@epa.gov>

Sent: Tuesday, March 9, 2021 4:41 PM

To: Kalmykova, Yuliya < YKalmykova@trccompanies.com> Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

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Yes, please include a field blank. You can use the address (highlighted) below for the shipment addressed to me.

Thanks,

Yaorong Qian, Ph.D Senior Chemist Analytical Chemistry Branch BEAD, Office of Pesticide Programs U.S. EPA 701 Mapes Rd. Ft. Meade, MD 20755

From: Kalmykova, Yuliya < YKalmykova@trccompanies.com>

Sent: Tuesday, March 09, 2021 4:31 PM To: Qian, Yaorong <qian.yaorong@epa.gov>

Subject: RE: [EXTERNAL] RE: Pesticide sampling - MassDEP

Hi Yaorong,

410-305-2636

Do you want to have a field blank? Which address should I send samples?

Thank you,

Yuliya Kalmykova, Ph.D. Senior Project Manager



From: Qian, Yaorong < gian.yaorong@epa.gov>

Sent: Tuesday, March 9, 2021 1:05 PM

To: Kalmykova, Yuliya < YKalmykova@trccompanies.com>

Cc: Nguyen, Thuy < Nguyen. Thuy@epa.gov>

Subject: [EXTERNAL] RE: Pesticide sampling - MassDEP

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Hi Yuliya,

Please use the same bottles that you would use for the Alpha Analytical for the split samples that you will send to us. Please let us know if you have any questions.

Thanks,

Yaorong Qian, Ph.D Senior Chemist Analytical Chemistry Branch BEAD, Office of Pesticide Programs U.S. EPA 701 Mapes Rd. Ft. Meade, MD 20755 410-305-2636

## Begin forwarded message:

From: "Kalmykova, Yuliya" <YKalmykova@trccompanies.com>

Date: March 9, 2021 at 10:40:46 AM EST To: "Nguyen, Thuy" < Nguyen. Thuy@epa.gov> Subject: Pesticide sampling - MassDEP

Hello Thuy,

I'm Yuliya Kalmykova, project manager at TRC companies. I manage Anvil sampling campaign for MassDEP, and I was referred to you by Mark Smith at MassDEP.

Mark let us know that we should send split samples to US EPA. I was wondering whether we can use bottles that we get from Alpha Analytical or if, instead, you prefer to send us bottles from your lab. Also, should we send you a field blank along with the product samples?

Please let me know.

Thank you,

Yuliya Kalmykova, Ph.D. Senior Project Manager



From: Smith, C Mark (DEP) < c.mark.smith@state.ma.us>

Sent: Monday, March 8, 2021 12:07 PM

To: Denly, Elizabeth <edenly@trccompanies.com>; Kiley, Cathy (DEP) <cathy.kiley@state.ma.us>

Cc: Gardner, George (DEP) <george.gardner@state.ma.us>; Locke, Paul (DEP)

<paul.locke@state.ma.us>; LaScola, Taryn (AGR) <taryn.lascola@state.ma.us>; Shaughnessy, Robert
(DEP) <robert.shaughnessy@state.ma.us>; Kalmykova, Yuliya <YKalmykova@trccompanies.com>;

Doherty, James < <u>IDoherty@trccompanies.com</u>>

Subject: Re: [EXTERNAL] RE: Pesticide sampling - DEP SARSSVI Project #102037

This is an **EXTERNAL** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Hi Liz,

EPA has requested that we have split samples sent to EPA lab as well. Could you please coordinate with Thuy on that - info below.

Let me know if you have any questions.

Mark

Thuy Nguyen

Analytical Chemistry Branch
USEPA/OPP/Biological and Economic Analysis Division (7503P)
Environmental Science Center
701 Mapes Road
Ft Meade, Maryland 20755-5350
Phone (410) 305 2905